

## ABSTRACT

The invention relates to a method and a device for monitoring signal processing units for sensors which detect the individual process control quantities or process measured values of a process. In order to improve the reliability of the sensor data of a vehicle, an at least redundant processing of the sensor data is carried out in two identical signal processing units (43, 31, 46; 44, 32, 45), which each have, independently and separately from the other, at least two processing devices (43, 44) in two evaluation devices (31, 32), whereby the sensor data are transmitted between the one processing device (43, 44) and the corresponding evaluation device (31, 32) through separate signal lines (60, 61).